

IN THE CLAIMS

1 (currently amended). A kit for directly detecting a RS virus ~~related biological~~ infected cell or an RS virus biological particle present in a sample in an amount of less than about 2000 cells or particles per microlitre (10^{-6} litre), said kit comprising

i) a solid support, and
ii) a plurality of a first targeting species bound to the solid support, said targeting species being capable of directly binding a predetermined RS virus ~~related biological~~ cell or biological particle when it is present in a sample that is brought into contact with the solid support, and

iii) a conjugate comprising a polymeric carrier molecule bound to

a) at least one ~~first and/or second~~ targeting species capable of directly binding a predetermined RS virus ~~related biological~~ cell or biological particle when it is present in a sample that is brought into contact with the solid support, and

b) at least one labelling species,

iv) an application zone for applying the sample comprising a RS virus related biological cell or biological particle, said zone comprising at least one of said conjugate, said conjugate being movable, and said application zone being in liquid contact with

v) a detection zone for detecting the presence, amount or concentration of said at least one conjugate, said zone further comprising ~~the plurality of a first~~ at least one targeting species bound to the solid support, and ~~optionally~~

~~vi) a positive control zone generating a positive control confirming the transfer of at least part of said sample from said application zone to said detection zone.~~

2 (currently amended). Kit according to claim 1, wherein the conjugate further comprises

~~i) a polymeric carrier,~~

ii) at least one connecting moiety foreign attached to the polymeric carrier molecule, and covalently attaching it to a
~~iii) at least one molecular species selected from the group of molecular species consisting of targeting species or a and labelling species, wherein each of the molecular species is covalently attached to at least one connecting moiety attached to the polymeric carrier molecule, .~~

3 (previously amended). Kit according to claim 2, wherein the polymeric carrier molecule comprises connecting moieties in an amount of from about 5 to about 5,000 μ moles per gram of polymeric carrier.

4-7 (cancelled).

8 (currently amended). Kit according to claim 1 7, wherein the ~~targetting~~ targeting species is selected from monoclonal and polyclonal antibodies.

9 (currently amended). Kit according to claim 8, wherein the ~~targetting~~ targeting species is an antibody recognising a nucleoprotein of RS virus or a glycoprotein of RS virus.

10 (currently amended). Kit according to claim 1, wherein the labelling species is selected from the group ~~of species~~ consisting of proteins; enzymes; toxins; drugs; dyes; fluorescent, luminescent, phosphorescent and other light-emitting substances; cells; metal-chelating substances; substances labelled with a radioactive isotope; and substances labelled with a heavy atom.

11 (currently amended). Kit according to claim 1, wherein the labelling species is selected from the group ~~of species~~ consisting of ferritin, phycoerythrins, phycocyanins, phycobilins, horseradish peroxidase, alkaline phosphatase, glucose oxidases, galactosidases, ureases, iminodiacetic acid, ethylenediaminetetraacetic acid, diethylenetriaminepentaacetic acid, and desferrioxamine B.

12 (currently amended). Kit according to claim 48 2, wherein the ~~first and second~~ targeting species attached to said molecule of conjugate are identical.

13 (currently amended). Kit according to claim ~~48~~ 2, wherein the ~~first and second~~ targeting species attached to said molecule of conjugate are non-identical.

14 (currently amended). Kit according to claim 2, wherein the polymeric carrier is selected from the group ~~of polymers~~ consisting of natural and synthetic polysaccharides; homopoly amino acids; natural and synthetic polypeptides and proteins; and synthetic polymers having nucleophilic functional groups.

15 (currently amended). Kit according to claim 2, wherein the polymeric carrier is selected from the group ~~of polymers~~ consisting of polyvinyl alcohols, polyallyl alcohols, polyethylene glycols and substituted polyacrylates.

16 (previously amended). Kit according to claim 2, wherein the polymeric carrier is selected from the group consisting of dextrans, carboxymethyl-dextrans, starches, hydroxyethyl-starches, hydroxypropyl-starches, glycogen, agarose derivatives, cellulose derivatives and natural gums.

17 (previously amended). Kit according to claim 16, wherein the polymeric carrier is a dextran.

18 (previously amended). Kit according to claim 16, wherein the polymeric carrier is selected from the group consisting of hydroxyethyl-celluloses and hydroxypropyl-celluloses.

19 (previously amended). Kit according to claim 1, said kit being a dip-stick.

20 (previously amended). Kit according to claim 1, said kit being adapted for a microsystem.

21 (previously amended). Kit according to claim 1, further comprising means for detecting at least one inflammatory indicator.

22 (original). Kit according to claim 21, wherein the at least one inflammatory indicator is a cytokine.

23 (original). Kit according to claim 22, comprising means for detecting at least 3 different cytokines.

24 (currently amended). Method of detecting a predetermined RS virus infected ~~related biological~~ cell or RS virus biological

particle present in a sample, said method comprising the steps of

i) providing ~~Establishing~~ a kit according to claim 1 for ~~directly detecting a RS virus related biological cell or biological particle present in a sample in an amount of less than about 2000 cells or biological particles per microlitre (10⁻⁶ litre), said kit comprising~~

~~A) a solid support, and~~

~~B) a plurality of a first targeting species bound to the solid support, said targeting species being capable of directly binding a predetermined RS virus related biological cell or biological particle when it is present in a sample that is brought into contact with the solid support, and~~

~~C) a conjugate comprising a polymeric carrier molecule bound to~~

~~a) at least one first and/or second targeting species capable of directly binding a predetermined RS virus related biological cell or biological particle when it is present in a sample that is brought into contact with the solid support, and~~

~~b) at least one labelling species,~~

~~D) an application zone for applying the sample comprising a RS virus related biological cell or biological particle, said zone comprising at least one conjugate, said conjugate being movable, and said application zone being in liquid contact with~~

~~E) a detection zone for detecting the presence, amount or concentration of said at least one conjugate, said zone further comprising the plurality of a first targetting species bound to the solid support, and optionally~~

~~F) a positive control zone generating a positive control confirming the transfer of at least part of said sample from said application zone to said detection zone.~~

ii) contacting the sample with the kit of step i), and .

iii) detecting, in said detection zone, the presence of a conjugate capable of binding the predetermined RS virus infected

~~related biological~~ cell or RS virus biological particle,

wherein the detection of the conjugate is indicative of the presence of the RS virus infected ~~related biological~~ cell or RS virus biological particle in the sample.

25 (original). Method according to claim 24, wherein the sample is a body fluid sample.

26 (original). Method according to claim 24, said kit further comprising means for detecting at least one predetermined inflammatory indicator.

27 (original). Method according to claim 26, wherein the inflammatory indicator is present in the sample in an amount of less than about 100 nanograms (100×10^{-9} grams) per millilitre (10^{-3} litre).

28 (currently amended). Method according to claim 24, wherein the polymeric carrier molecule comprises i) a plurality of at least one connecting moiety attached to polymeric carrier group, and ii) at least one molecular species selected from the group ~~of molecular species~~ consisting of targeting species and labelling species, wherein each of the molecular species is attached to at least one connecting moiety attached to the polymeric carrier molecule.

29 (cancelled).

30 (currently amended). Method according to claim 24, wherein the labelling species is selected from the group ~~of species~~ consisting of proteins; enzymes; toxins; drugs; dyes; fluorescent, luminescent, phosphorescent and other light-emitting substances; metal-chelating substances; substances labelled with a radioactive isotope; and substances labelled with a heavy atom.

31 (currently amended). Method according to claim 24, wherein the labelling species is selected from the group ~~of species~~ consisting of ferritin, phycoerythrins, phycocyanins, phycobilins, horseradish peroxidase, alkaline phosphatase, glucose oxidases, galactosidases, ureases, iminodiacetic acid, ethylenediaminetetraacetic acid, diethylenetriaminepentaacetic acid, and desferrioxamine B.

32 (currently amended). Method according to claim 24, wherein the polymeric carrier is selected from the group of ~~polymers~~ consisting of natural and synthetic polysaccharides; homopoly amino acids; natural and synthetic polypeptides and proteins; and synthetic polymers having nucleophilic functional groups.

33 (currently amended). Method according to claim 24, wherein the polymeric carrier is selected from the group of ~~polymers~~ consisting of polyvinyl alcohols, polyallyl alcohols, polyethylene glycols and substituted polyacrylates.

34 (previously amended). Method according to claim 24, wherein the polymeric carrier is selected from the group consisting of dextrans, carboxymethyl-dextrans, starches, hydroxyethyl-starches, hydroxypropyl-starches, glycogen, agarose derivatives, cellulose derivatives and natural gums.

35 (original). Method according to claim 34, wherein the polymeric carrier is a dextran.

36 (previously amended). Method according to claim 24, wherein the polymeric carrier is selected from the group consisting of hydroxyethyl-celluloses and hydroxypropyl-celluloses.

37 (currently amended). Method according to claim 26, wherein the predetermined inflammatory indicator is selected from the group consisting of agonists from the IL-1 system, ~~preferably IL-1 α , IL-1 β , IL-1 α~~ , autoantibodies against IL-1 α , sIL1-RI and sIL1-RII.

38 (currently amended). Method according to claim 26, wherein the predetermined inflammatory indicator is selected from the group consisting of agonists from the TNF α system, ~~preferably sTNFR p55 and p75~~.

39 (previously amended). Method according to claim 26, wherein the predetermined inflammatory indicator is selected from the group consisting of IL-6 and autoantibodies against IL-6.

40 (previously amended). Method according to claim 26, wherein the predetermined inflammatory indicator is selected from

the group consisting of IL-12, sIL-4R, TNF β (LT), INF γ , IL-4, and IL-10.

41 (currently amended). Method according to claims 26, wherein the predetermined inflammatory indicator is selected from the group consisting of IL-2, RANTES, IL-8, sIL-2R, IL-18, IFN α , and eosinophil cationic protein.

42 (currently amended). A method for diagnosing a RS virus infectious condition in an individual, said method comprising the steps of

~~i) Establishing (a) providing a kit according to claim 1 for directly detecting a RS virus infected related biological cell or RS virus biological particle present in a sample in an amount of less than about 2000 cells or particles per microlitre (10^{-6} litre), said kit comprising~~

~~A) a solid support, and~~

~~B) a plurality of a first targeting species bound to the solid support, said targeting species being capable of directly binding a predetermined RS virus related biological cell or biological particle when it is present in a sample that is brought into contact with the solid support, and~~

~~C) a conjugate comprising a polymeric carrier molecule bound to~~

~~a) at least one first and/or second targeting species capable of directly binding a predetermined RS virus related biological cell or biological particle when it is present in a sample that is brought into contact with the solid support, and~~

~~b) at least one labelling species,~~

~~D) an application zone for applying the sample comprising a RS virus related biological cell or biological particle, said zone comprising at least one conjugate, said conjugate being movable, and said application zone being in liquid contact with~~

~~E) a detection zone for detecting the presence, amount or concentration of said at least one conjugate, said zone further comprising the plurality of a first targetting species bound to the solid support, and optionally~~

~~F) a positive control zone generating a positive control confirming the transfer of at least part of said sample from said application zone to said detection zone.~~

~~(b) ii) contacting the sample with the kit of step (a) i),~~
and

~~(c) iii) detecting, in the detection zone, the presence of a conjugate capable of binding the predetermined RS virus infected related biological cell or RS virus biological particle, wherein the detection of the conjugate is indicative of the presence of the RS virus infected related biological cell or RS virus biological particle in the sample; and~~

~~(d) iv) diagnosing said infectious condition.~~

43 (currently amended). The method according to claim 42 further comprising the step ~~steps~~ of

~~i) detecting a predetermined inflammatory indicator present in a body fluid sample, and~~

~~ii) detecting a predetermined inflammatory indicator present in a body fluid sample, and prior to~~

~~iii) diagnosing said infectious condition.~~

44 (cancelled).

45 (new). The kit according to claim 1 further comprising vi) a positive control zone comprising means for generating a positive control confirming the transfer of at least part of said sample from said application zone to said detection zone.

46 (new). The method of claim 24, said kit further comprising vi) a positive control zone comprising means for generating a positive control confirming the transfer of at least part of said sample from said application zone to said detection zone.

47 (new). The method of claim 43, said kit further comprising vi) a positive control zone comprising means for generating a positive control confirming the transfer of at least part of said sample from said application zone to said detection zone.

48 (new). The kit according to claim 1 where at least one molecule of said conjugate comprises a plurality of targeting species.

49 (new). The kit of claim 1 in which at least one molecule of conjugate comprises a plurality of labeling species.

50 (new). The kit of claim 49 in which the labeling species attached to said molecule are identical.

51 (new). The kit of claim 1 in which the labeling species is a fluorescent substance.

52 (new). The kit of claim 51 in which the labeling species is rhodamine.

53 (new). The kit of claim 1 in which the polymeric carrier is a polysaccharide.

54 (new). The kit of claim 53 in which the polymeric carrier is a polydextran.

55 (new). The kit of claim 51 in which the polymeric carrier is a polysaccharide.

56 (new). The kit of claim 52 in which the polymeric carrier is a polydextran.

57 (new). The kit of claim 1 in which the targeting species is an antibody.

58 (new). The kit of claim 56 in which the targeting species is an antibody.